

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application:

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Listing of Claims:

Claims 1-7 (Cancelled)

- 10 Claim 8 (New): An image processing device, comprising:
- a first buffer unit for storing data of a plurality of pixels;
 - a first processing unit, coupled to the first buffer unit, for processing the data of the plurality of pixels in accordance with a first function and thereby generating first data;
 - 15 a second buffer unit, coupled to the first processing unit, for storing the first data;
 - and
 - a second processing unit, coupled to the second buffer unit, for processing the first data in accordance with a second function and thereby generating second data;
 - wherein the first buffer unit, the first processing unit, the second buffer unit, and the
 - 20 second processing unit are coupled together in series.

Claim 9 (New): The image processing device of claim 8, wherein the plurality of pixels correspond to a plurality of horizontal lines.

- 25 Claim 10 (New): The image processing device of claim 8, wherein the first and second functions are two of a scaling function, an image enhancement function, a color processing function, a halftone processing function, a filtering function, and a data formatting function with respect to specific I/O apparatuses.

Claim 11 (New): The image processing device of claim 8 being installed in a scanner or a multi-function peripheral.

5 Claim 12 (New): An image processing method executed in an image processing device, comprising:
buffering data of a plurality of pixels, the plurality of pixels including one or more pixels of a certain horizontal line;
processing the data of the plurality of pixels in accordance with a first function and
10 thereby generating first data;
buffering the first data; and
processing the first data in accordance with a second function and thereby generating second data;
wherein the step of processing the first data in accordance with the second function
15 is initiated before all pixels of the certain horizontal line are processed by the step of processing the data in accordance with the first function.

Claim 13 (New): The method of claim 12, wherein the plurality of pixels correspond to a plurality of horizontal lines.

20 Claim 14 (New): The method of claim 12, wherein the first and second functions are two of a scaling function, an image enhancement function, a color processing function, a halftone processing function, a filtering function, and a data formatting function with respect to specific I/O apparatuses.

25 Claim 15 (New): The method of claim 12, wherein the image processing device is installed in a scanner or a multi-function peripheral.